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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/795,987

03/10/2004

Fumiyuki Suzuki

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EXAMINER

RONESI, VICKEY M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

11/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/795,987

Applicant(s)

SUZUKI ET AL.

Examiner

Vickey Ronesi

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/21/2007 has been entered.

2. All outstanding rejections are withdrawn in light of applicant's amendment filed on 9/21/2007.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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With respect to claim 1, the phrase “a molded article having an impact strength higher than one having the same components which had not been surface treated with a coupling agent” fails to satisfy the written description requirement of 35 USC 112, first paragraph since there does not appear to be a written description requirement of the phrase in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163. The examiner has not found any support for this phraseology in the specification as originally filed. While there is support for “the resulting resin molded product enjoyed high impact strength” when glass balloons are added on page 12, lines 1-4 of the specification, this does not support a limitation which states that the impact strength is higher for a composition with a glass balloon that has been surface treated compared to an untreated glass balloon. Furthermore, the specification fails to suggest that components other than hollow glass balloons (i.e., glass fibers) are treated with a coupling agent to provide improved impact properties. Applicant cites the comparison between Example 1-3 and Comparative Example 2-1 in Table 1 of the specification as support for improved impact strength when using a surface treatment, however, this data only supports an improvement for one specific composition having one specific surface treatment on only one component (i.e., hollow glass balloon) and therefore cannot support the presently claimed property for the full range of presently claimed compositions.

With respect to claim 2, it is rejection for being dependent on a rejected claim.

Claim Rejections - 35 USC § 103

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khemani et al (US 6,573,340) in view of Wilson Sonoo (JP 01-234434, full English-language translation).

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Khemani et al discloses a biodegradable polymer composition for use in molded articles (col. 16, line 61) comprising a stiff biopolymer exemplified by polylactic acid (col. 8, lines 1-17, Example 6); a soft biopolymer; 5-95 wt % (col. 15, lines 59-60) fillers such as hollow glass spheres (i.e., balloons) (col. 15, line 16); and most preferably 10-30 wt % (col. 17, lines 4-5) fibers such as glass fibers (col. 16, line 38).

Khemani et al fails to disclose using a hollow glass balloon surface treated with a coupling agent or the amount of hollow glass balloon with sufficient specificity.

Sonoo discloses polyester molding compositions and teaches that hollow glass spheres are used to prepare lightweight molded products having a specific gravity of 1.1-0.85 (page 6, line 4) in an amount of 15-45 wt % (page 6, lines 13-20), wherein the hollow glass spheres are treated with a acid and a coupling agent (page 11, lines 14-18). Sonoo further teaches that glass fibers are present in an amount of 10-50 parts by weight per 100 parts by weight pf polyester (page 12, line 23 to page 13, line 3).

Given that Khemani et al teaches a polylactic acid composition with hollow glass spheres and further given that Sonoo discloses a polyester molding composition containing hollow glass spheres treated with a coupling agent in an amount of 15-45 wt %, it would have been obvious to one of ordinary skill in the art to apply the teachings regarding coupling agent and amounts to the composition of Khemani et al in order to have a viable molding composition and in turn a molded article with improved impact properties and density and heat distortion temperature like presently claimed.

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6. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sonoo (JP 01-234434, full English-language translation) in view of Kuroki et al (US 6,462,105).

Sonoo discloses polyester molding compositions and teaches that hollow glass spheres are used to prepare lightweight molded products having a specific gravity of 1.1-0.85 (page 6, line 4) in an amount of 15-45 wt % (page 6, lines 13-20), wherein the hollow glass spheres are treated with an acid and a coupling agent (page 11, lines 14-18). Sonoo further teaches that glass fibers are present in an amount of 10-50 parts by weight per 100 parts by weight of polyester (page 12, line 23 to page 13, line 3).

Sonoo discloses an unsaturated polyester resin (page 6, line 21 to page 8, line 9). Sonoo fails to disclose polylactic acid as the polyester.

Kuroki et al discloses a polyester composition with filler and teaches that suitable polyesters include polylactic acid as well as other polyesters derived from dibasic acids (col. 4, line 1 to col. 5, line 2).

Given that Kuroki et al discloses polyesters like those taught by Sonoo and polylactic acid as suitable polyesters for molded materials, it would have been obvious to one of ordinary skill in the art to utilize polylactic acid as the polyester of Sonoo and thereby obtain a composition with the presently claimed impact strength and heat distortion temperature properties.

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Response to Arguments

7. Applicant's arguments filed on 9/21/2007 are moot in view of the new grounds of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/7/2007
Vickey Ronesi



/Vasu Jagannathan/
Supervisory Patent Examiner
Technology Center 1700